September 24, 2017 9:31 AM

weight$_f$ − weight$_i$ = mass of Cu

4. Measure the mass of the plated carbon rod precisely, and calculate the amount of copper that has plated on its surface. Record the mass of copper.
5. To remove the copper, set up the circuit once more, but *reverse the connections* to the cell so that the copper plates back onto the copper strip. 15 min

Concluding Questions

1. One mole of copper atoms (63.5 g) contains 6.02×10^{23} atoms. Using this information and the mass of copper plated on the carbon rod, calculate
   (a) the number of copper atoms plated → mass of Cu × $\frac{6.02 \times 10^{23} \text{ atoms}}{63.5 \text{ g}}$ = _____ atoms
   (b) the number of electrons transferred 2e⁻/atom ....
   (c) the number of coulombs transferred in 20 min (15) = _____ C
2. If 1 A = 1 C/s, what was the current in amperes? $\frac{\text{C}}{\text{s}}$ = _____ A
3. Compare your calculated current with the measured current by calculating the percent difference between the two currents.

(comment on why not identical) averaged 0.15A % diff = $\frac{\text{ammeter measured} - \text{average}}{\text{ammeter avg.}}$ =

Title:

Name _____
(Partners _____)

Purpose:

Procedure: (just a summary, with diagram)

Data: weights and resulting mass of copper
current measurements + average
length of time

Concluding Qs: #1-3